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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/901,531	07/09/2001	Brian C. Barnes	2000.054600	7123

23720 7590 12/05/2006

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EXAMINER

BROWN, CHRISTOPHER J

ART UNIT PAPER NUMBER

2134

DATE MAILED: 12/05/2006

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/901,531
Filing Date: July 09, 2001
Appellant(s): BARNES ET AL.

MAILED

DEC 05 2006

Technology Center 2100

Scott F. Diring
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 9/18/2006 appealing from the Office action
mailed 6/16/2006.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,594,305	Roeck	7-2003
5,237,567	Nay	8-1993
5,680,458	Spelman	10-1997

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5,881,248	Mergard	3-1999
6,115,817	Whitmire	9-2000

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 7-10, 11, 12, 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roeck US 6,594,305 in view of Nay US 5,237,567.

As per claims 1, 8, 12, 19, and 21, Roeck teaches a hardware unit (modem) adapted to receive an incoming signal over a communications channel, (Col 7 lines 60-65). Roeck teaches that the modem accepts control codes over the communications channel (messages), (Col 8 lines 33-37). Roeck teaches that the unit communicates with assigned transmission parameters (power, freq, and time slot), (col 8 line 37). Roeck does not teach authentication codes, or security violations.

Nay teaches generating an authentication code (hash or check sum) from data and transferring the data and authentication code to a unit, (Col 37 lines 35-51). If the codes are inconsistent, the unit signals a security violation, (Col 37 line 39). It would have been

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obvious to one of ordinary skill in the art to combine the communication system of Roeck with the authentication mechanism of Nay to prevent message tampering and improve security.

As per claims 7, and 18, Nay teaches that the program generates authentication code based on data (hash, checksum), (col 27 lines 40-45).

As per claim 9 Nay teaches the processing unit comprises a computer, (Col 37 line 43).

As per claim 10 Nay teaches the processor is coupled to a bus, (Col 37 lines 40-44). Nay teaches an expansion card coupled to the bus, (Col 27 lines 60-63).

As per claim 11, and 20, Roeck teaches that the hardware unit is adapted to prohibit at least some communication over the communication channel in response to an error (Col 8 lines 55-60).

Claims 2, 3, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roeck US 6,594,305 in view of Nay US 5,237,567, in view of Spelman US 5,680,458.

As per claims 2, 3, 13, and 14 Spelman discloses sending authentication code, hidden, out of band, (Col 4 lines 14-20).

It would have been obvious to one of ordinary skill in the art to modify the previous Roeck-Nay system with the out of band messaging of Spelman to assure that the message has not been tampered with (Spelman Col 4 lines 31-34).

**Claims 4, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over
Roeck US 6,594,305 in view of Nay US 5,237,567 in view of Mergard US 5,881,248**

As per claims 4, and 15, Mergard discloses use of the unused portions of the bus, (Col 1 lines 45-52). It would have been obvious to modify the Roeck-Nay system with Mergard because the utilization improved bus performance.

**Claims 6, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over
Roeck US 6,594,305 in view of Nay US 5,237,567 in view of Whitmire US 6,115,817**

As per claims 6, and 17 Witmire discloses use of cryptography to send data over a network, the recipient decrypts all of the data including codes, (Col 1 lines 48-60). It would have been obvious to modify the previous Roeck-Nay system with the cryptography of Whitmire to increase security.

(10) Response to Argument

A.

With respect to claims 1, 12, and 21 the appellant argues that the combination of Roeck and Nay fail to each every element of the claimed invention. The appellant asserts that Roeck is completely silent with regard to the use of authentication codes or determining security violations. The appellant asserts that Nay, the secondary reference, only teaches error detection and not authentication or security violations. The examiner asserts that that Nay does teach authentication (verification of data) using the same method as the invention, a checksum of sent data or codes, (Nay Col 37 lines 35-50). The examiner

asserts that the appellant is narrowly construing the term security violation to mean that the data has been vandalized. The instant invention cannot determine *how* the data has been corrupted using the instant method only that it *was* corrupted. Nay teaches discovering errors in the data using a common authentication method (checksums, or hashes of the data). Where the checksum is taken at a transmitter, and recalculated at the receiver to affirm that the data has not been changed, or corrupted. The examiner asserts that because the appellant has not defined the term “security violation” that it must be viewed with the broadest reasonable interpretation. The examiner interprets security violation as that the data has been corrupted in any way shape or form. This violation could be for the security of the data integrity for instance. Additionally the examiner notes that the Spelman reference teaches a substantially similar authentication method to Nay in order to prevent rouge attempts to alter the message, i.e. “security” violations, (Col 5 lines 30-37, Col 6 lines 47-60).

The appellant argues that if Nay detects a problem, the data is corrected automatically using the ECC data. The examiner argues that this only holds if the error is a single bit error. Nay teaches that Nay cannot restore good data for multiple bit-errors (Nay col 37 lines 60-65).

The appellant argues that Nay does not provide proper motivation to be combined with Roeck US 6,594,305. The appellant argues that Nay is unconcerned with authentication, and that motivation Nay is only concerned with data integrity for reliability, not security. The examiner asserts that the appellant is narrowly construing the term security. The examiner asserts that the security of data integrity for reliability, or to improve detection

of bad, hacked, or corrupted data is motivation for one of ordinary skill in the art to combine Roeck with Nay. The appellant argues that motivation for combination must be suggested in the reference itself. The examiner argues MPEP 706.02 (j) First, there must be some suggestion or motivation, either in the references themselves or *in the knowledge generally available to one of ordinary skill in the art*, to modify the reference or to combine reference teachings, and MPEP 2144, the rationale to modify or combine the prior art does not have to be expressly stated in the prior art; the rationale may be expressly or impliedly contained in the prior art *or it may be reasoned from knowledge generally available to one of ordinary skill in the art*. (emphasis added).

B.

With respect to claims 2, 3, 13, and 14 the appellant argues that because Roeck and Nay are silent regarding identifying security violations it is inconceivable that there is motivation to combine Roeck and Nay with Spelman. The examiner asserts, even granting the appellant his definition of “security violations” that there would be ample motivation to one of ordinary skill in the art to improve the security of a transmission system. Spelman teaches in column 4 lines 29-33, that to transmit out-of-band should assure that the communication that the message did not come from a party masquerading in place of the intended party.

The appellant argues that the examiner used impermissible hindsight to combine the Roeck, Nay and Spelman references. The examiner argues it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the

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level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

C.

With regards to claims 4, and 15, the appellant argues again that Nay would not have any reason to improve security, and that the examiner has used impermissible hindsight.

The examiner asserts, that there would be ample motivation to one of ordinary skill in the art to improve the security of a transmission system.

The examiner argues it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

D.

With regard to claims 6, and 17 the appellant argues that the claims are allowable based on the reasons stated for claims 1, and 12. The examiner has rejected claims 1, and 12 therefore claims 6, and 17 cannot be allowed.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

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For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Christopher J. Brown



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